

Attorney Docket No. 06618-706001  
Serial No. 09/692,593  
Amendment dated April 13, 2004  
Reply to Office Action dated December 16, 2003

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

Kindly cancel claims 6-11 without prejudice.

1. (Previously presented) A method, comprising:  
forming a sacrificial layer of material on a substrate;  
covering said sacrificial layer of material with a polymer material;  
removing said sacrificial layer to form a cantilevered polymer structure over a substrate using micromachining techniques;  
forming at least one structure between said polymer structure and said substrate which avoids said polymer structure sticking to said substrate after said removing;  
forming a plurality of leg portions, extending between an extending portion of said cantilevered polymer structure, and said substrate; and  
an additional etching to free said leg portions from said substrate.

2 -3. (Canceled)

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4. (Previously presented) A method as in claim 1, wherein said additional etching operation comprises a gas phase etching which removes a portion of said substrate adjacent said leg portions.

5. (Previously presented) A method as in claim 1, wherein said additional etching operation comprises etching using  $\text{BrF}_3$ .

6-11. (Cancelled)

12. (Previously presented) A method, comprising:  
forming a sacrificial layer of material on a substrate;  
covering said sacrificial layer of material with a polymer material;

removing said sacrificial layer to form a cantilevered polymer structure over a substrate using micromachining techniques;

forming at least one structure between said polymer structure and said substrate which avoids said polymer structure sticking to said substrate after said removing;

wherein said forming at least one structure comprises forming an anti stick layer on said substrate, said anti stick

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layer formed of a different material than a material of said substrate;

wherein said anti stick layer is part of a sacrificial layer, and further comprising removing said sacrificial layer;

further comprising a forming a plurality of leg portions, extending between an extending portion of said cantilevered polymer structure and said substrate; and

etching away portions of said substrate which abut near said leg portions.

13. (Original) A method as in claim 1, wherein said polymer material includes Parylene.

14. (Original) A method as in claim 1, wherein said polymer material is one with a Young's modulus of substantially 4 GPa.

15. (Original) A method as in claim 1, wherein said cantilevered polymer structure has an unsupported cantilever portion which is greater than 100 microns in length.

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16. (Previously presented) A method, comprising:  
obtaining a silicon substrate; and  
forming a cantilevered polymer portion over said silicon substrate, and unsupported relative to said silicon substrate;  
and  
preventing said cantilevered polymer portion from sticking to said silicon substrate;  
wherein said preventing comprises forming legs connected to said cantilevered polymer portion, said legs extending towards said silicon substrate; and  
wherein said forming legs comprises forming legs which extend to said substrate and may stick to said substrate, and subsequently etching to free said legs from said substrate.

17 - 18. (Canceled)

19. (Previously presented) A method, comprising:  
obtaining a silicon substrate;  
forming a cantilevered polymer portion over said silicon substrate, and unsupported relative to said silicon substrate;  
preventing said cantilevered polymer portion from sticking to said silicon substrate; and

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wherein said etching to free said legs comprises forming removing a portion of said substrate around said legs to free the legs from the substrate.

20. (Previously presented) A method, comprising:

obtaining a silicon substrate;

forming a cantilevered polymer portion over said silicon substrate, and unsupported relative to said silicon substrate;

preventing said cantilevered polymer portion from sticking to said silicon substrate;

wherein said etching to free said legs comprises forming removing a portion of said substrate around said legs; and

wherein said etching comprises  $\text{BrF}_3$  etching to remove a portion of said substrate around said legs.

21. (Previously presented) A method as in claim 16, wherein said polymer includes Parylene.

22. (Original) A method as in claim 16, wherein said preventing comprises forming a layer that prevents said cantilevered portion from sticking to said substrate.

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23. (Original) A method as in claim 22, further comprising removing said layer after preventing said cantilevered portion from sticking to said substrate.

24. (Original) A method as in claim 23, wherein said forming a layer comprises forming a layer of polysilicon.

25. (Original) A method as in claim 23, wherein said forming a layer comprises forming a layer of titanium.

26. (Previously presented) A structure, comprising:  
a silicon substrate; and  
a polymer cantilevered element, overlying said silicon substrate, and forming a cavity between a bottom surface of said cantilevered element and said silicon substrate, said polymer cantilevered element having a thickness less than 100 microns, and a length greater than 100 microns; and  
further comprising an indentation in said substrate in an area of said leg, wherein said leg is separated from said substrate.

27. (Original) A structure as in claim 26, wherein said cantilevered element further includes at least one leg thereon,

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which leg extends between said bottom surface of said polymer cantilevered element and said silicon substrate.

28. (Original) A structure as in claim 27, wherein said cantilevered element includes at least a plurality of legs thereon, each of which extends between said bottom surface and said silicon substrate.

29. (Canceled)